The Mission of the Texas Birth Defects Monitoring Division

Protecting and promoting the health of the people of Texas through:

- Identifying and describing the patterns of birth defects in Texas
- Collaborating with others in finding causes of birth defects, working toward prevention, and linking families with services.

Birth Defects

Birth Defects are abnormal conditions that are present at birth. They can result in physical and/or mental disability and can be fatal. The number and type vary, depending on family history and the parents' age, race, ethnicity, diet, medical care, and exposure to harmful substances.

Some common birth defects are spina bifida, cleft lip, missing arms or legs, and Down syndrome.

Birth defects are a serious problem in Texas and the United States. Nationally, one in thirty-three babies is born with a birth defect. Approximately 9,000-10,000 babies are born in Texas each year with at least one birth defect. With each pregnancy, parents face a 2-4% chance of the baby being affected by a birth defect or mental retardation.

Texas Birth Defects Monitoring Division

Bureau of Epidemiology
Texas Department of Health
1100 W. 49th Street
Austin, Texas 78756

512-458-7232

Surveillance

The Texas Birth Defects Monitoring Division collects data from hospital records on birth defects in these general categories:

- Central Nervous System
- Cardiovascular and Respiratory
- Oral Clefts
- Gastrointestinal
- Genitourinary
- Musculoskeletal
- Chromosomal
- Fetal Alcohol Syndrome

In addition to routine data collection, we conduct investigations of birth defects clusters throughout the state. Health care professionals and the public can report apparently unusual concentrations of birth defects to TBDMD. Birth defect investigations are then initiated to determine if these reported birth defects represent a rate that is higher than expected for a given area (clusters). About 12 to 15 clusters are investigated each year.

Research

In 1996, a 5-year grant was awarded by the Centers for Disease Control and Prevention to TBDMD to establish the Texas Birth Defects Research Center, one of eight around the nation which actively participates in the National Birth Defects Prevention Study. Results from this study will allow the TBDMD and its partners to design effective birth defect prevention programs.

The Texas Birth Defects Research Center also uses data from the Texas Birth Defects Registry to conduct studies throughout Texas. Partnerships with academic, government, and other researchers maximize the quality of studies performed through the Research Center.

Prevention

The role of the Texas Birth Defects Monitoring Division is to support the education of the public and health professionals about the causes, surveillance, impact, and prevention of birth defects.

Although the causes of most birth defects remain unknown, research has revealed that certain factors can lead to birth defects. For example, some illnesses in a pregnant mother can affect the fetus' development. Drugs, alcohol, and poisons can harm the unborn baby. Good nutrition and vitamins help to prevent certain birth defects.

One of the most promising results that birth defects research has yielded is identifying the role of folic acid, a B vitamin, in preventing the occurrence and recurrence of neural tube defects such as spina bifida and anencephaly.

The Texas Birth Defects Monitoring Division also collaborates with other state and local programs to prevent Fetal Alcohol Syndrome, which is the leading known cause of congenital mental retardation. A curriculum that trains community members to become effective speakers on the topic of alcohol-related birth defects is offered periodically in locations throughout the state.

Services

When a child is identified through the Birth Defects Registry, staff work to ensure that the child and his or her family is referred to appropriate services that will assist the family with medical and other needs, such as the Chronically Ill and Disabled Children Program of the Texas Department of Health.

TBDMD also maintains information about a variety of support groups, nonprofit health agencies, and government programs for information and assistance.

Other services provided include professional and public education. Expert staff members are available to address community and professional groups about birth defects

For More Information

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Region 2/3:
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Region 5/6:
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Texas Department of Health
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Region 7/4:
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Texas Department of Health
7430 Louis Pasteur
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Texas Department of Health
601 West Sesame Drive
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(956) 444-3204
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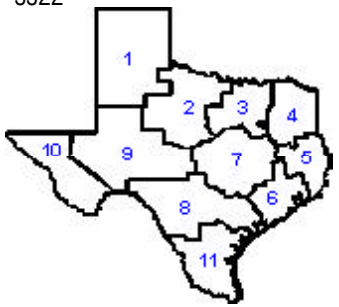


Preventing Birth Defects

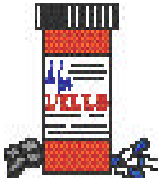
Although many of the factors that can cause birth defects are not known, scientific research has allowed us to identify many ways in which birth defects can be prevented. If a pregnant woman can avoid exposure to the following, she can reduce the risk that her baby will be born with birth defects.

Alcohol & Street Drugs

No amount of alcohol is known to be safe for the developing fetus. When a pregnant woman drinks, the alcohol in her blood passes through the placenta and reaches the baby–sometimes with devastating consequences. Fetal Alcohol Syndrome (FAS) is the leading known preventable cause of mental retardation in the United States. Children with FAS have permanent mental and behavioral problems. They often have distinctly malformed facial features.

Drugs such as cocaine and marijuana, when taken by a pregnant woman, are delivered to the her unborn baby via the blood supply through the umbilical cord. These and most other illegal drugs pass easily to the fetus and therefore must be avoided.

Medicine & Other Drugs



Medicines prescribed by doctors and even the medicines that can be purchased without a prescription can have side effects on a developing fetus or pregnancy. For example, Accutane, a drug commonly prescribed for acne, can cause serious birth defects of the head, brain and face if taken early in pregnancy. Some antiseizure drugs can have adverse effects on the baby. All women should talk to their doctor before taking medicine during pregnancy.

Infectious Agents

Germs that cause only mild or no symptoms at all in adults can be deadly to the unborn fetus. Women of childbearing age can avoid some of these by making sure that all of their immunizations are up-to-date before becoming pregnant. Other harmful germs and parasites can be avoided by using good hygiene. The parasite that causes toxoplasmosis, for example, is found in cat feces and raw meat, and can cause severe brain damage in the fetus. Pregnant women should avoid contact with raw meat, sand or litter boxes, and wear gloves when gardening.

Other Hazardous Substances

Because most substances can pass through the placenta into the fetus' blood supply, mothers-to-be should avoid exposure to anything toxic. This includes fumes from strong household chemicals such as gasoline, paints, paint thinner, and pesticides; lead in some paints; and water from contaminated sources. Smoke from another person's cigarette can also be harmful to the unborn child.

How the data are collected

The Texas Birth Defects Registry is an "active surveillance" system. This means that, rather than having health professionals submit reports of suspected birth defects to the Department of Health, Surveillance Specialists visit hospitals and major birthing centers and review the records of all births in Texas (approximately 330,000 each year). Documents reviewed include:

- Hospital ICD-9 reports
- Hospital unit logs (L&D, NICU)
- Birthing center records

When these records suggest that a birth defect may have been present, the Surveillance Specialists closely review the medical charts of the mother and infant when available (live births). Data collected and used in reporting of birth defects must meet the following case definition:

- Mother resides in Texas
- Infant/fetus must have a structural birth defect or developmental disability
- Defect must be diagnosed within the first year of life (within six years for FAS)
- Infant must be born alive *or* fetus must be at least 20 weeks gestational age or 500 grams or more birth weight

Data collected on birth defects in Texas are carefully screened for accuracy by our office staff and by medical doctors who provide clinical review. Care is taken at each step to protect the confidentiality of case families.

More information available at http://www.tdh.state.tx.us/tbdmd/index.htm

How the data are used

Texas Birth Defects Monitoring Division has been collecting data on birth defects in Texas since 1995, beginning with a pilot area encompassing the Lower Rio Grande Valley and the Greater Houston area (approximately 35% of live births in Texas). In 1997, active surveillance expanded to include 80% of Texas births, and finally in 1998, data collection efforts went statewide.

Analysis of surveillance data enables the Texas Department of Health to draw an increasingly accurate picture of the extent and occurrence of birth defects in Texas. Data are also helpful in:

- Identifying changes in rates over time, to detect increases that may show a change in women's health, environmental conditions, and other factors.
- Identifying geographical areas with consistently high rates.
- Providing summaries and tables upon request to the public, health planners, local health departments, and others.
- Investigating reports of unusual "clusters" of birth defects. Looking at Registry data helps determine the actual extent and nature of the cluster accurately and efficiently. Each year, TBDMD handles more than a dozen cluster investigations.
- Identifying families of children with specific birth defects who may be invited to participate in research studies.
- Ensuring that families of children identified in the Registry are linked to services through the TBDMD referral system.